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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,602	02/28/2002	Masakazu Yamamoto	220112US3PCT	3608
22850	7590	09/17/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SOLAK, TIMOTHY P	
			ART UNIT	PAPER NUMBER

3746

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,602

Applicant(s)

YAMAMOTO ET AL.

Examiner

Timothy P. Solak

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) 10-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/13/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

FINAL ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-7 and 9 as they depend from Claim 1, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (5,674,056), in view of Khazanov et al. (5,616,973). Yamamoto et al. teach a motor frame comprising: a first cylinder 14 housing a motor stator 13 therein and a second cylinder 2 disposed around said first cylinder with a space 40 defined in-between for a handled fluid that has been discharged from an impeller 9 to flow therethrough from an inlet nozzle casing 3 to an outlet nozzle casing 4. Yamamoto et al. further disclose a seat (see 47a in Figure 2) disposed on an outer circumferential surface of said second cylinder for installing a frequency converter 76 thereon. Yamamoto et al. further teach a motor frame side-plate 21 equipped with a bearing 22 supporting a rotor 18 and a component 4 attached in direct contact to the axial end of the motor frame (see Figure 1). Yamamoto et al. further teach the impeller is attached to a shaft 7 and identical inlet and outlet casings 3-4 (see Figure 1). Although Yamamoto et al. teach most of the limitations of the claims, including a canned motor with a frequency converter; they do not disclose the first and second cylinder housings being made integrally formed of "one metal". The unity or diversity of parts depends on the choice of

manufacturer and the convenience and availability of the machines and tools necessary to construct the pump. Khazanov et al., disclosing a canned motor, specifically teach a first cylindrical housing 50 and a second cylindrical housing 51 formed from "one metal" (see Figure 3). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the "one metal" design as taught by Khazanov et al., in the pump disclosed by Yamamoto et al., to have advantageously facilitated manufacturing.

Although Yamamoto et al. teach most of the limitations of the claims, including a canned motor having a frequency converter, he does not disclose the second cylinder housing to have sockets and bolts on opposite axial ends. Khazanov et al., disclosing a canned motor having a first cylindrical housing 50 and a second cylindrical housing 51, specifically teach sockets (not labeled, but clearly seen in Figure 1, see retaining bolts 70/109) located at opposite ends of the second cylinder housing providing coaxial relationship with attached components 60/100. Khazanov et al. teach the sockets advantageously secured the unit together (column 4, lines 49-50). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the sockets taught by Khazanov et al., in the pump disclosed by Yamamoto et al., to have advantageously secured the unit.

Claims 3 and Claims 5-7 and 9 as they depend from Claim 3, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al., in view of Khazanov et al. (both previously mentioned), in further view of Norihei (JP 10-080093). Although the combination of prior art teaches most of the limitations of the claims, including a canned motor having a seat for an inverter, it does not disclose the inverter seat located between bolt seats. The position of the

seat with respect to the bolt seats is directly related to installation requirements and not to any structural relation required for enablement of the unit to function. Norihei disclosing, a motor frame, specifically teaches a seat 11a formed on a frame located between bolt seats 3b. Norihei teach the symmetrical arrangement advantageously eased installation (see abstract; Solutions, lines 5-10). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the bolt/seat arrangement taught by Norihei, in the pump disclosed by Yamamoto et al., to have advantageously eased installation.

Claim 4, as it depends from Claims 1 and 3, is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al., in view of Khazanov et al., in further view of Moriya et al. (all mentioned previously). Although Yamamoto et al. teach most of the limitations of the claims, including ribs 43 interconnecting two cylinders; they do not disclose the ribs to have a length, which is at least equal to one half of the overall length of the motor frame. Moriya et al., disclosing a pump casing and motor frame 23, specifically teach an integrally rib 24a (column 6, line 14) supporting a second cylinder 6. Moriya et al. teach the rib to be "at least equal to one half of the overall length of the motor frame" (see Figures 1 and 5). Moriya et al. teach the ribs advantageously supported the motor (column 7, lines 30-35). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have used the ribs taught by Moriya et al., in the pump disclosed by Yamamoto et al., to have advantageously supported the motor.

Response to Arguments

Applicant's arguments filed 06/10/2004 have been fully considered but they are not persuasive.

With respect to applicant's contention, that convenience and availability is insufficient motivation to unify or diversify parts; common knowledge, generally available to those skilled in the art is sufficient motivation to combine references.

Convenience and availability of machines and material are major factors in the design of any structure, and by themselves supply ample motivation to make integral that, which is separate, or separate that which is integral. A manufacturer would not form a section of angle iron by welding together two pieces of flat bar, if a section of angle iron was available.

Further applicants suggest that "simply because a manufacture could construct first and second cylinders *integrally* from one metal material does not comprise a motivation for one skilled in the art to do so" (page 9, lines 5-7). The primary reference, Yamamoto et al., discloses several parts, rigidly secured together into a single unit, so combined as to constitute a unitary or *integral* whole. It would have required a minimum level of skill, in the art of pump fabrication, to have looked around the shop at the available materials and machines and formed the two cylinders, disclosed by Yamamoto et al. as one. Further, there is no reason to believe that if the pump disclosed by Yamamoto et al. were to be made integral, it would stop working or effect the operation of the unit.

Applicants cite the MPEP and suggest, "that making a component integral may be unobvious where it provides certain advantages" (page 9, lines 8-9). To determine whether

making a component integral may or may not be obvious, one skilled in the art needs to look at the "certain advantages" provided. Under the laws of Thermodynamics, the structure disclosed by Yamamoto et al., transfers heat from the frequency converter to the fluid. Applicants argue that the "certain advantages" offered by their integral design are an increase in heat transfer due to a lack of joints (page 8, line 15). (*It is noted, however, that said joints are not recited in the rejected claims.*) The "certain advantages" that applicants suggest render the integral structure unobvious, over the structure disclosed by Yamamoto et al., are in fact a simple optimization of the heat transfer that has to take place in the structure disclosed by the primary reference. In order to increase the patentable weight given to applicant's integral design, the "certain advantages" need to be new and unexpected advantages; different in kind and not merely in degree from the prior art.

Therefore this argument is not persuasive and the rejection is proper.

With respect to applicant's argument, namely the combination of Yamamoto et al., in view of Khazanov et al. is not obvious, because the cooling fluid disclosed by Khazanov et al. is not "handled" by the pump; the operational characterizes of the secondary reference are not being used in the combination. Instead, only the structural limitations of the two cylinders made of one metal are being combined with the teachings of Yamamoto et al. rendering the claimed subject matter obvious. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the

test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

Further it is noted, that the secondary reference has not been modified (see arguments, page 10, first paragraph). Only the teachings of the structure have been used in the rejections.

Therefore this argument is not persuasive and rejections proper.

Applicant's argument with respect to Claim 3, namely the combination of prior art does not supply motivation for the combination, has been considered but is not persuasive.

Applicants question the meaning of the phrase "enablement of the unit" used in the previous Office Action, which states:

"The position of the seat with respect to the bolt seats is directly related to installation requirements and not to any structural relation required for enablement of the unit." (page 3, last line to page 4, line 2)

The phrase "enablement of the unit" is used to encompass the effective results of the unit, i.e. to pump. Examples of structural relations that effect "enablement of the unit" are the number, type and location of impellers, bearing positions or the flow passage of a canned pump. Examples of structural relations that do not effect "enablement of the unit" are bolt patterns, wiring connections or the color of the unit. The latter elements can be changed or altered without affecting the pumping ability of the unit.

For further clarity, this expression has been changed to --for enablement of the unit to function-- in the above-cited rejections.

Applicants contend, "the claimed feature cannot be dismissed based on an alleged lack of relationship to "enablement of the unit". However, applicants are mistaken if they suggest that

the claimed feature were dismissed. The claimed features were rejected in view of Norihei who discloses a seat (11a) formed on a motor frame located between bolt seats (3b). Norihei further teaches the symmetrical arrangement advantageously eased installation (see abstract; Solutions, lines 5-10). The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. Norihei teaches a seat located between bolts and provides the motivation for the combination.

With respect to applicant's argument, namely Norihei can not supply motivation to arrange parts so as to improve heat transfer, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. The motivation used to make a combination does not have to agree with applicant's reasoning.

In response to applicant's argument that Norihei is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. In this case, Norihei is teaching an electrical box mounted on a motor housing and must be looked at when considering mounting a converter on a motor.

Therefore this argument is not persuasive and the rejection proper.

In response to applicant's arguments with respect to Claim 4, the arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claim defines a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Therefore this argument is not persuasive and the rejection proper.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P. Solak whose telephone number is 703-308-6197. The examiner can normally be reached on Monday through Friday from 9am to 5:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine R. Yu can be reached on 703-308-2675. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tps

September 8, 2004



CHERYL J. TYLER
PRIMARY EXAMINER